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628.16
M26prcn
1981
1st qtr.
Poplar River
Cooperative
Monitoring
Agreement ... data
exchange, Canadian
contribution

POPLAR RIVER

COOPERATIVE MONITORING

ARRANGEMENT

1981

FIRST QUARTER DATA EXCHANGE

CANADIAN CONTRIBUTION

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INTRODUCTION

1981 - FIRST QUARTER DATA EXCHANGE
POPLAR RIVER BASIN

On September 23, 1980, the Governments of Canada and the United States agreed to a Cooperative Monitoring Arrangement for the exchange of data, determination of significant change in water quality, water quantity, groundwater and air quality as a result of operation of the Saskatchewan Power Corporation coal-fired thermal generating station and preparation of an annual report to governments. A binational committee called the Poplar River Bilateral Monitoring Committee was established to carry out the responsibilities under the arrangement.

One of the responsibilities of the committee is the quarterly exchange of data which will supersede the regular exchange of information relating to the Poplar River Project which was agreed to by the Governments of Canada, the United States, Montana and Saskatchewan on July 12, 1976. The Poplar River Bilateral Monitoring Committee met on March 12-13, 1981 and established the data to be exchanged and the mechanisms. The committee agreed that the first exchange of information under the Cooperative Monitoring Arrangement would be for the period January 1, 1981 to March 31, 1981 and on a regular quarterly basis thereafter.

The Saskatchewan Power Corporation's 300 Megawatt Poplar River power station at Coronach was officially commissioned on June 20, 1981.

This package includes water quality, water quantity and groundwater and air quality information from Canadian sources for the Poplar River basin for the first quarter of 1981. The pages have been numbered consecutively in the corners for ease of reference. Pages have been included from the Technical Monitoring Schedule. These pages also retain their original page numbering.

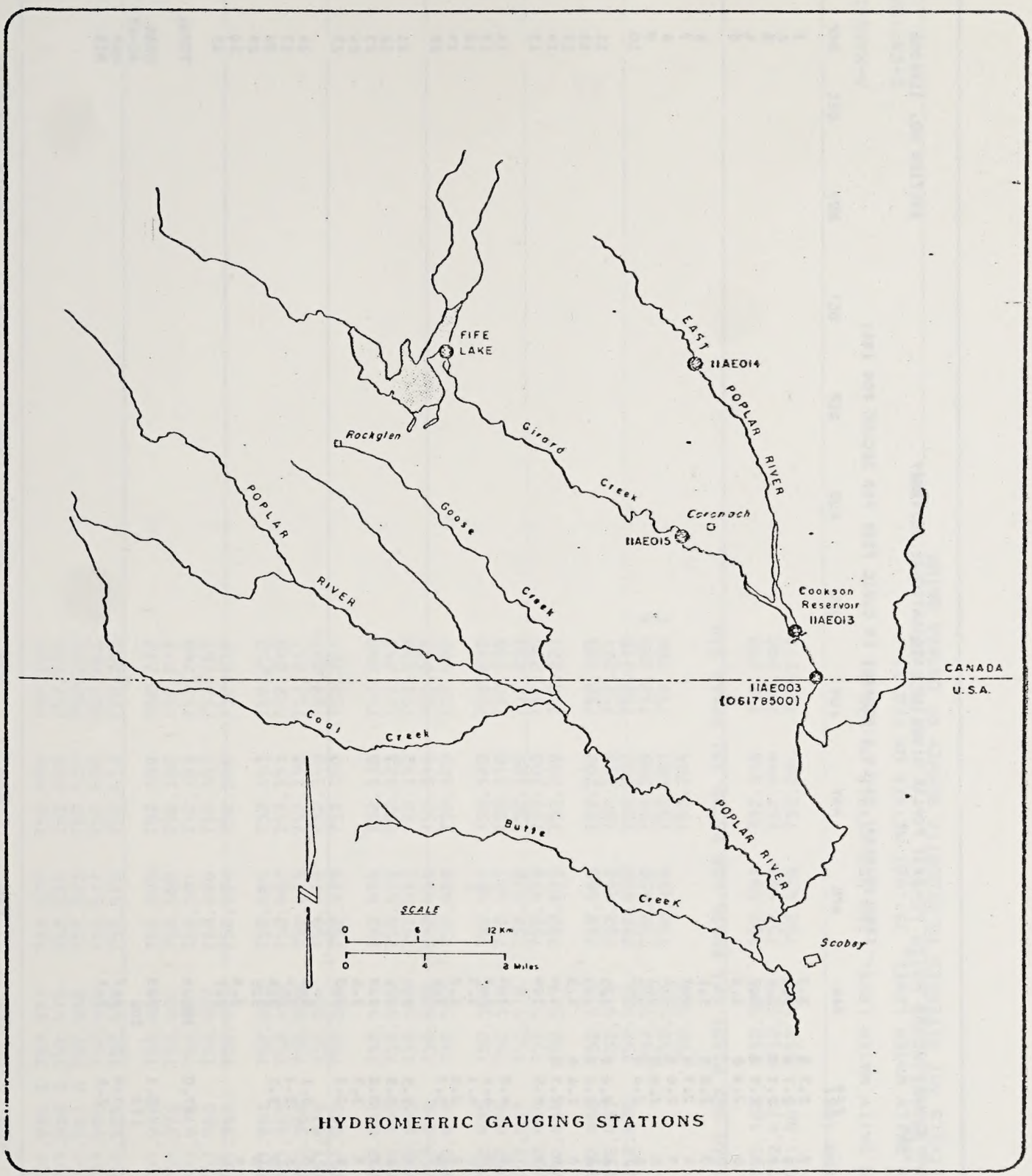
STREAMFLOW MONITORING
AT HYDROMETRIC GAUGING STATIONS

Responsible Agency: Environment Canada

Daily mean discharge or levels and instantaneous monthly extremes as normally published in surface water data publications.

	Index No.	Station Name
1.	11AE003 (06178500)	East Poplar River at International Boundary
2.	11AE013	Cookson Reservoir near Coronach
3.	11AE015	Girard Creek near Coronach
4.	11AE014	East Poplar River above Cookson Reservoir
5.	*	Responsible Agency: Saskatchewan Environment Fife Lake Overflow

* - Miscellaneous measurements of outflow to be made by SDOE during periods of outflow only.



HYDROMETRIC GAUGING STATIONS

WATER SURVEY OF CANADA
MAY 11 1981 PAGE 4
REGINA, SASK.

EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

STATION NO. 11AE003

(PRELIMINARY) DAILY DISCHARGE IN CUBIC FEET PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	2.9 B	2.7 B	3.1										1
2	2.8 B	2.7 B	3.1										2
3	2.8 B	2.7 B	3.1										3
4	2.7 B	2.9 B	3.2										4
5	2.7 B	2.9 B	3.2										5
6	2.8 B	2.8 B	3.1										6
7	2.8 B	2.7 B	3.1										7
8	2.8 B	2.6 B	3.1										8
9	2.7 B	2.6 B	3.1										9
10	2.7 B	2.6 B	3.2										10
11	2.7 B	2.6 B	3.3										11
12	2.7 B	2.6 B	3.3										12
13	2.7 B	2.6 B	3.3										13
14	2.7 B	2.7 B	3.4										14
15	2.7 B	3.5	3.4										15
16	2.7 B	4.0	3.4										16
17	2.7 B	4.6	3.3										17
18	2.7 B	4.1	3.3										18
19	2.7 B	3.6	3.2										19
20	2.7 B	3.7	3.3										20
21	2.7 B	3.5	3.1										21
22	2.8 B	3.3	3.1										22
23	2.8 B	3.3	3.3										23
24	2.8 B	3.3	3.3										24
25	2.9 B	3.1	3.3										25
26	2.8 B	3.1	3.2										26
27	2.8 B	3.1	3.4										27
28	2.8 B	3.1	3.6										28
29	2.7 B		3.5										29
30	2.7 B		3.6										30
31	2.7 B		3.7										31
TOTAL	85.2	87.0	101.6										TOTAL
MEAN	2.7	3.1	3.3										MEAN
AC-FT	169	173	202										AC-FT
MAX	2.9	4.6	3.7										MAX
MIN	2.7	2.6	3.1										MIN

B-ICE CONDITIONS

COOKSON RESERVOIR NEAR CORONACH

STATION NO. 11AE013

(PRELIMINARY) DAILY WATER LEVEL IN METRES FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	752.033	751.990 E	752.471	752.527	752.444	752.291							1
2	752.029	751.988 E	752.475	752.525	752.442	752.292							2
3	752.026	751.987 A	752.488	752.523	752.432	752.289							3
4	752.024	751.990	752.492	752.517	752.426	752.286							4
5	752.026	751.989	752.490	752.513	752.413	752.283							5
6	752.022 A	751.986	752.488	752.505	752.399	752.277							6
7	752.021 E	751.976	752.491	752.502	752.386	752.271							7
8	752.020 E	751.972	752.494	752.501	752.383	752.268							8
9	752.018 E	751.968	752.497	752.496	752.367	752.263							9
10	752.017 E	751.964	752.495	752.494	752.362	752.258							10
11	752.016 E	751.961	752.493	752.485	752.357	752.253							11
12	752.014 E	751.965	752.499	752.482	752.353	752.249							12
13	752.013 E	751.968	752.500	752.475	752.350	752.251							13
14	752.012 E	751.974	752.504	752.474	752.349	752.257							14
15	752.011 E	751.982	752.508	752.479	752.350	752.251							15
16	752.010 E	752.033	752.511	752.476	752.338	752.249							16
17	752.008 E	752.155	752.506	752.474	752.328	752.243							17
18	752.007 E	752.245	752.506	752.473	752.322	752.238							18
19	752.006 E	752.356	752.509	752.464	752.316	752.237							19
20	752.004 E	752.414	752.507	752.458	752.320	752.239							20
21	752.003 E	752.435	752.506	752.461	752.320	752.238							21
22	752.002 E	752.450	752.510	752.461	752.318	752.238							22
23	752.001 E	752.461	752.518	752.472	752.306	752.233							23
24	752.000 E	752.464	752.516	752.478	752.300	752.230							24
25	751.999 E	752.464	752.517	752.475	752.299	752.227							25
26	751.997 E	752.468	752.513	752.468	752.297	752.223							26
27	751.996 E	752.467	752.518	752.466	752.293	752.221							27
28	751.994 E	752.470	752.524	752.462	752.291	752.215							28
29	751.993 E		752.524	752.458	752.289	752.220 A							29
30	751.992 E		752.524	752.454	752.287	752.220 E							30
31	751.991 E		752.529		752.284								31
TOTAL	23312.305	21060.542	23327.623	22574.498	23322.721	22567.510							TOTAL
MEAN	752.010	752.162	752.504	752.483	752.346	752.250							MEAN
MAX	752.033	752.470	752.529	752.527	752.444	752.292							MAX
MIN	751.991	751.961	752.471	752.454	752.284	752.215							MIN

SUMMARY FOR THE YEAR 1981

MAXIMUM DAILY WATER LEVEL, 752.529 METRES ON MAR 31

MINIMUM DAILY WATER LEVEL, 751.961 METRES ON FEB 11
MAXIMUM INSTANTANEOUS WATER LEVEL, METRES AT ON
WATER LEVELS ARE REFERRED TO GEODETIC SURVEY OF CANADA DATUM

A-MANUAL GAUGE

E-ESTIMATED

GIRARD CREEK NEAR CORONACH

STATION NO. 11AE015

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0.242	0.120	0.093	0.149							1
2			0.209	0.129	0.123	0.137							2
3			0.199	0.118	0.121	0.128							3
4			0.186	0.116	0.123	0.127							4
5			0.181	0.116	0.130	0.125							5
6			0.177	0.116	0.128	0.119							6
7			0.175	0.115	0.141	0.117							7
8			0.172	0.113	0.142	0.128							8
9			0.171	0.116	0.132	0.129							9
10			0.166	0.116	0.129	0.128							10
11			0.166	0.116	0.124	0.127							11
12			0.162	0.117	0.122	0.128							12
13			0.164	0.115	0.118	0.162							13
14			0.156	0.114	0.121	0.165							14
15			0.150	0.114	0.118	0.145							15
16			0.142	0.114	0.123	0.137							16
17			0.136	0.113	0.119	0.128							17
18			0.129	0.118	0.126	0.114							18
19		0.958 A	0.111	0.121	0.119	0.112							19
20		1.31	0.140	0.123	0.109	0.115							20
21		0.763	0.192	0.131	0.120	0.126							21
22		0.696	0.137	0.122	0.121	0.120							22
23		0.550	0.131	0.118	0.119	0.131							23
24		0.418	0.122	0.120	0.121	0.129							24
25		0.301	0.121	0.122	0.124	0.129							25
26		0.273	0.123	0.120	0.124	0.137							26
27		0.304	0.120	0.121	0.121	0.147							27
28		0.231	0.119	0.128	0.130	0.157							28
29			0.118	0.087	0.128	0.162 A							29
30			0.119	0.084	0.128	0.162 E							30
31			0.127		0.129								31
TOTAL			4.743	3.495	3.826	4.020							TOTAL
MEAN			0.153	0.117	0.123	0.134							MEAN
DAM3			410	302	331	347							DAM3
MAX			0.242	0.131	0.142	0.165							MAX
MIN			0.119	0.084	0.093	0.112							MIN

A-MANUAL GAUGE

E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, 1.55 M3/S AT 0642 CST ON FEB 20

WAT[illegible] SURVEY OF CANADA
JUL 30 1981 PAGE 7
REGINA, SASK.

EAST POPLAR R[illegible]R ABOVE COOKSON RESERVOIR

STATIO[illegible] O. 11AE014

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1981

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0.018 B	0	0	0	0						1
2			0.010	0	0	0	0						2
3			0.008	0	0	0	0						3
4			0.006	0	0	0	0						4
5			0.004	0	0	0	0						5
6			0.003	0	0	0	0						6
7			0.002	0	0	0	0						7
8			0.003	0	0	0	0						8
9			0.002	0	0	0	0						9
10			0.001	0	0	0	0						10
11			0.001	0	0	0	0						11
12			0	0	0	0	0						12
13			0	0	0	0	0						13
14			0	0	0	0	0						14
15			0	0	0	0	0						15
16		3.00 B	0	0	0	0	0						16
17		2.26 B	0	0	0	0	0						17
18		0.577 B	0	0	0	0	0						18
19		0.189 B	0	0	0	0	0						19
20		0.215 B	0	0	0	0	0						20
21		0.200 B	0	0	0	0	0						21
22		0.189 B	0	0	0	0	0						22
23		0.109 B	0	0	0	0	0						23
24		0.075 B	0	0	0	0	0						24
25		0.043 B	0	0	0	0	0						25
26		0.057 B	0	0	0	0	0						26
27		0.029 B	0	0	0	0	0						27
28		0.020 B	0	0	0	0	0						28
29			0	0	0	0	0						29
30			0	0	0	0	0						30
31			0		0		0						31
TOTAL			0.058	0	0	0	0						TOTAL
MEAN			0.002	0	0	0	0						MEAN
DAM3			5.01	0	0	0	0						DAM3
MAX			0.018	0	0	0	0						MAX
MIN			0	0	0	0	0						MIN

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, M3/S AT ON NOT DETERMINED

No Flow from
Fife Lake

SURFACE WATER QUALITY MONITORING

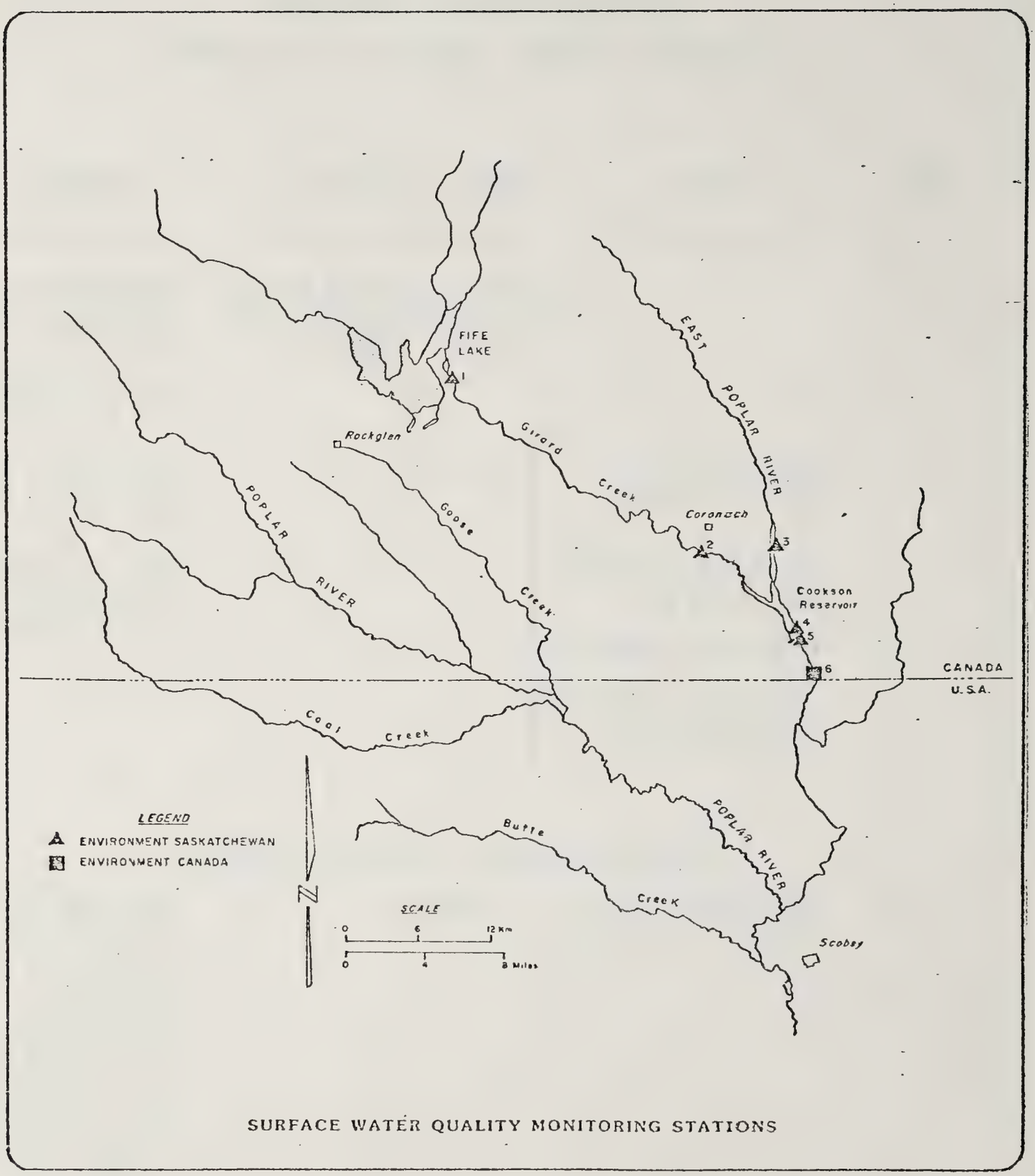
Responsible Agency: Saskatchewan Environment

No. on Map	Station	Sampling Frequency	Parameters
1.	Fife Lake Overflow	Weekly during overflow	ph, cond, temp, B.
		Once during each period of overflow greater than 2 weeks' duration	Above plus D.O., major ions, TDS, NO_3, TKN, TP
			TIC/TOC, TSS, VSS, Tot Col, Fec Col.
2.	Girard Cr. S. of town of Coronach	Quarterly	D.O., Temp, pH, Cond, major ions, TDS, NO_3, B,
3.	Upper end of Cookson Res. @ Hwy 36		TKN, TP, TIC/TOC, TSS, VSS, Tot Col, Fec Col, chlorophyll
4.	Cookson Res. near dam		
5.	Cookson Res. discharge at concrete pad		

Responsible Agency: Environment Canada

6.	East Poplar River at International Boundary	Monthly*	Ph, Temp, Cond, D.O., Turbidity, Tot Col, Fec Col, chlorophyll A, major ions, nutrients, Ba, Cd, Co, Cu, Ni, Pb, Zn, V, Fe, Mn, As, B, Se, organochlorides, phenoxy herbicides, pyridine herbicides, Hg, Cyanide phenolics, NFR

*DOE and USGS sampling, staggered at 2 week intervals. Quarterly split sampling and analysis on joint basis.



SURFACE WATER QUALITY MONITORING STATIONS

Quarterly Sampling

LOCATION Girard Cr. S. of Town of Coronach

DATE	1980 4th	1981 1st	2nd	3rd	4th
AGENCY		FEB SPC			
PARAMETERS					
B mg/L		1.62			
TDS mg/L		1115			
VSS mg/L		3.2			
HCO_3 mg/L		756			
CO_3 mg/L					
Cl mg/L		5.9			
SO_4 mg/L		275			
Ca mg/L		82			
Mg mg/L		46			
K mg/L		7.5			
Na mg/L		225			
Conductivity US/CM		1570			
Fe mg/L		0.27			
Mn mg/L		0.13			
total hardness mg/L		394.1			
NO_3 as N mg/L		0.23			
TKN mg/L		0.62			
TP mg/L		0.016			
TIC mg/L		177			
TOC mg/L		5.3			
pH mg/L		7.86			
temperature (^oC)		0.0			
D. O. mg/L		9.87			
total Coliforms orgs/100 ml		18			
Fecal Coliforms orgs/100 ml		L1			
Chlorophyll mg/m^3		L0.001			
TSS mg/L		6.0			

Quarterly Sampling

LOCATION Upper end of Cookson Res. at Hwy. #36

DATE	1980 4th	1981 1st	2nd	3rd	4th
AGENCY		FEB SPC			
PARAMETERS					
B mg/L		1.23			
TDS mg/L		809			
VSS mg/L		1.6			
HCO_3 mg/L		461			
CO_3 mg/L		18.5			
Cl mg/L		6.9			
SO_4 mg/L		200			
Ca mg/L		48			
Mg mg/L		43.2			
K mg/L		15.5			
Na mg/L		159			
Conductivity US/CM		1120			
Fe mg/L		0.06			
Mn mg/L		L0.01			
total hardness mg/L		297.7			
NO_3 as N mg/L		0.32			
TKN mg/L		1.32			
TP mg/L		0.055			
TIC mg/L		107			
TOC mg/L		12.7			
pH mg/L		8.6			
temperature (^oC)		1.0			
D. O. mg/L		11.9			
total Coliforms orgs/100 ml		11			
Fecal Coliforms orgs/100 ml		L1			
Chlorophyll mg/m^3		0.001			
TSS mg/L		1.6			

Quarterly Sampling

LOCATION Cookson Reservoir near dam

DATE	1980 4th	1981 1st	2nd	3rd	4th
AGENCY	NOV SPC	FEB SPC			
PARAMETERS					
B mg/L	1.01	1.22			
TDS mg/L	669	767			
VSS mg/L	4.6	1.2			
HCO_3 mg/L	373	455			
CO_3 mg/L	9.0	15.0			
Cl mg/L	5.9	6.5			
SO_4 mg/L	180	195			
Ca mg/L	27.5	47.0			
Mg mg/L	34.7	42.2			
K mg/L	15.2	14.5			
Na mg/L	140	153			
Conductivity US/CM	1040	1090			
Fe mg/L	0.19	0.07			
Mn mg/L	L0.01	L0.01			
total hardness mg/L	211.5	291.1			
NO_3 as N mg/L	0.43	0.36			
TKN mg/L	1.32	1.16			
TP mg/L	0.056	0.051			
TIC mg/L	93.0	106.0			
TOC mg/L	14.0	12.2			
pH mg/L	8.68	8.52			
temperature (^oC)	5.0	0.2			
D. O. mg/L	10.3	8.06			
total Coliforms orgs/100 ml	50	7			
Fecal Coliforms orgs/100 ml	L1	L1			
Chlorophyll mg/m^3		0.002			
TSS mg/L	14.0	1.6			

Quarterly Sampling

LOCATION Cookson Res. discharge at concrete pad

DATE	1980 4th	1st	2nd	1981 3rd	4th
AGENCY		FEB SPC			
PARAMETERS					
B mg/L		1.83			
TDS mg/L		1305			
VSS mg/L		2.0			
HCO_3 mg/L		667			
CO_3 mg/L					
Cl mg/L		8.7			
SO_4 mg/L		478			
Ca mg/L		110			
Mg mg/L		70			
K mg/L		9.4			
Na mg/L		205			
Conductivity US/CM		1780			
Fe mg/L		1.03			
Mn mg/L		0.15			
total hardness mg/L		562.9			
NO_3 as N mg/L		0.4			
TKN mg/L		1.08			
TP mg/L		0.027			
TIC mg/L		157			
TOC mg/L		7.4			
pH mg/L		7.67			
temperature (^oC)		2.0			
D. O. mg/L		7.65			
total Coliforms orgs/100 ml		9			
Fecal Coliforms orgs/100 ml		2			
Chlorophyll mg/m^3		0.003			
TSS mg/L		4.4			

SAMPLE 038100174
STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY
SAMPLED 31/03/81 1250 CST
PROJECT 0003

PRELIMINARY DATA

PARAMETER		VALUE	ACCEPTED RANGE	ERROR
COLOR	02021L	50.		
COND	02041F	1454.		
COND	02041L	1463.		
TEMP	02061F	7.5		
TEMP	02061L	20.8		
TURB	02073F	4.3		
TURB	02073L	5.9		
B-D	05105L	1.2		
DOC	06104L	6.8		
PHENOL	06535P	NV		
CN	06604P	0.013		
CH-A	06717P	0.008		
POC	06902L	0.98		
NO3NO2	07110D	0.06		
NH3	07506L	NV		
TN-C	07603L	0.54		
DN	07651D	0.45		
DN	07651L	0.42		
PN	07902L	0.12		
DO	08101P	11.0		
F	09105L	0.23		
ALK-T	10101L	501.		
ALK-P	10151L	0.0		
PH	10301F	8.5		
PH	10301L	8.1		
NFR	10401L	24.		
NA	11103L	212.		
MG	12102L	49.5		
SIO2	14105L	9.5		
DP	15103D	0.008		
TP	15406L	0.022		
PP-C	15901L	0.014		
SO4	16306L	265.		
CL	17206L	6.1		
HCB	17811L	L0.001		
P,P-DDT	18000L	L0.004		
O,P-DDT	18005L	L0.001		
P,P-DDD	18010L	L0.002		
P,P-DDE	18020L	L0.001		
P,P-METH	18030L	L0.01		
HEPT	18040L	L0.001		
HEPT-E	18045L	L0.002		
A-ENDO	18050L	L0.001		
B-ENDO	18055L	L0.003		
A-CHL	18060L	L0.003		
G-CHL	18065L	L0.002		
LINDANE	18070L	L0.001		

A-BHC	18075L	L0.001
MIREX	18125L	L0.001
ALDRIN	18130L	L0.001
ENDRIN	18140L	L0.002
DIELDRIN	18150L	L0.002
A-1242	18159L	L0.002
A-1254	18160L	L0.002
A-1260	18162L	L0.005
A-TOTAL	18164L	L0.002
2,4-D	18500P	L0.004
2,4,5-T	18510P	L0.002
MCPA	18520P	L0.2
SILVEX	18540P	L0.004
2,4-DB	18550P	L0.009
2,4-DP	18555P	L0.004
PICLORAM	18601P	L0.2
K	19103L	7.8
CA	20103L	46.5
U-T	23020P	L0.001
MN-D	25104D	0.09
FE-D	26104D	0.08
CO-T	27020P	L0.002
NI-T	28020P	0.003
CU-T	29020P	0.001
ZN-T	30020P	0.001
AS-D	33104D	0.0015
SE-D	34102D	L.0005
T-COLI	36002F	14.
F-COLI	36012F	12.
CD-T	48020P	L0.001
BA-T	56020P	L0.05
HG-T	80011P	0.04
PB-T	82020P	L0.004

SAMPLE 038100389
LOCATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY
SAMPLED 210481141SCST
PROJECT 0003

PRELIMINARY DATA

PARAMETER	VALUE	ACCEPTED RANGE	ERROR
COLOR	02021L	30.	
COND	02041F	1540.	
COND	02041L	1555.	
TEMP	02061F	9.5	
TEMP	02061L	19.6	
TURB	02073F	3.4	
TURB	02073L	3.8	
B-D	05105L	1.3	
DOC	06104L	NV	
PHENOL	06535P	L0.001	
CN	06604P	0.007	
CH-A	06717P	0.005	
POC	06902L	1.1	
NO3NO2	07110D	0.01	
NH3	07506L	L0.1	
TN-C	07603L	0.46	
DN	07651D	0.35	
DN	07651L	0.38	
PN	07902L	0.08	
DO	08101P	11.2	
F	09105L	0.26	
ALK-T	10101L	523.	
ALK-P	10151L	0.0	
PH	10301F	8.1	
PH	10301L	8.2	
NFR	10401L	18.	
NA	11103L	226.	
MG	12102L	58.	
SIO2	14105L	9.4	
DP	15103D	0.014	
TP	15406L	0.025	
PP-C	15901L	0.011	
SO4	16306L	300.	
CL	17206L	6.2	
HCB	17811L	L0.001	
P,P-DDT	18000L	L0.004	
O,P-DDT	18005L	L0.001	
P,P-DDD	18010L	L0.002	
P,P-DDE	18020L	L0.001	
P,P-METH	18030L	L0.01	
HEPT	18040L	L0.001	
HEPT-E	18045L	L0.002	
A-ENDO	18050L	L0.001	
B-ENDO	18055L	L0.003	
A-CHL	18060L	L0.003	
G-CHL	18065L	L0.002	
LINDANE	18070L	L0.001	

A-BHC	18075L	0.004
MIREX	18125L	L0.001
ALDRIN	18130L	L0.001
ENDRIN	18140L	L0.002
DIELDRIN	18150L	L0.002
A-1242	18159L	L0.002
A-1254	18160L	L0.002
A-1260	18162L	L0.005
A-TOTAL	18164L	L0.002
2,4-D	18500P	L0.004
2,4,5-T	18510P	L0.002
MCPA	18520P	L0.2
SILVEX	18540P	L0.004
2,4-DB	18550P	L0.009
2,4-DP	18555P	L0.004
PICLORAM	18601P	L0.2
K	19103L	8.0
CA	20103L	41.5
V-T	23020P	L0.001
MN-D	25104D	0.06
FE-D	26104D	0.11
CO-T	27020P	0.004
NI-T	28020P	NV
CU-T	29020P	0.006
ZN-T	30020P	NV
AS-D	33104D	0.0016
SE-D	34102D	L.0005
T-COLI	36002F	4.
F-COLI	36012F	L2.
CD-T	48020P	L0.001
BA-T	56020P	0.16
HG-T	80011P	L0.02
PB-T	82020P	L0.004

SAMPLE 038100740
STATION 00SA11AE0008 EAST POPLAR R. AT INTERNATIONAL BOUNDARY
SAMPLED 20058112000CST
PROJECT 0003

PRELIMINARY DATA

PARAMETER	VALUE	ACCEPTED RANGE	ERROR
COLOR	02021L	20.	
COND	02041F	1200.	
COND	02041L	1184.	
TEMP	02061F	16.0	
TEMP	02061L	21.2	
TURB	02073F	3.4	
TURB	02073L	3.5	
B-D	05105L	0.95	
DOC	06104L	11.	
PHENOL	06535P	L0.001	
CN	06604P	0.006	
CH-A	06717P	0.01	
POC	06902L	0.65	
ND3NO2	07110D	0.03	
NH3	07506L	L0.1	
TN-C	07603L	0.81	
DN	07651D	0.65	
DN	07651L	0.71	
PN	07902L	0.10	
DO	08101P	9.5	
F	09105L	0.29	
ALK-T	10101L	429.	
ALK-P	10151L	1.4	
PH	10301F	8.1	
PH	10301L	8.4	
NFR	10401L	7.	
NA	11103L	166.	
MG	12102L	42.5	
SIO2	14105L	2.3	
DP	15103D	0.014	
TP	15406L	0.033	
PP-C	15901L	0.019	
SO4	16306L	214.	
CL	17206L	6.1	
HCB	17811L	L0.001	
P,P-DDT	18000L	L0.004	
O,P-DDT	18005L	L0.001	
P,P-DDD	18010L	L0.002	
P,P-DDE	18020L	L0.001	
P,P-METH	18030L	L0.01	
HEPT	18040L	L0.001	
HEPT-E	18045L	L0.002	
A-ENDO	18050L	L0.001	
B-ENDO	18055L	L0.003	
A-CHL	18060L	L0.003	
G-CHL	18065L	L0.002	
LINDANE	18070L	0.001	

A-BHC	18075L	0.004
MIREX	18125L	L0.001
ALDRIN	18130L	L0.001
ENDRIN	18140L	L0.002
DIELDRIN	18150L	L0.002
A-1242	18159L	L0.002
A-1254	18160L	L0.002
A-1260	18162L	L0.005
A-TOTAL	18164L	L0.002
2,4-D	18500P	0.03
2,4,5-T	18510P	L0.002
MCPA	18520P	L0.2
SILVEX	18540P	L0.004
2,4-DB	18550P	L0.009
2,4-DP	18555P	L0.004
PICLORAM	18601P	L0.2
K	19103L	14.
CA	20103L	31.6
V-T	23020P	L0.001
MN-D	25104D	0.06
FE-D	26104D	0.05
CO-T	27020P	0.002
NI-T	28020P	NV
CU-T	29020P	0.003
ZN-T	30020P	NV
AS-D	33104D	0.0021
SE-D	34102D	L.0005
T-COLI	36002F	8.
F-COLI	36012F	8.
CD-T	48020P	L0.001
BA-T	56020P	0.05
HG-T	80011P	L0.02
PB-T	82020P	L0.004

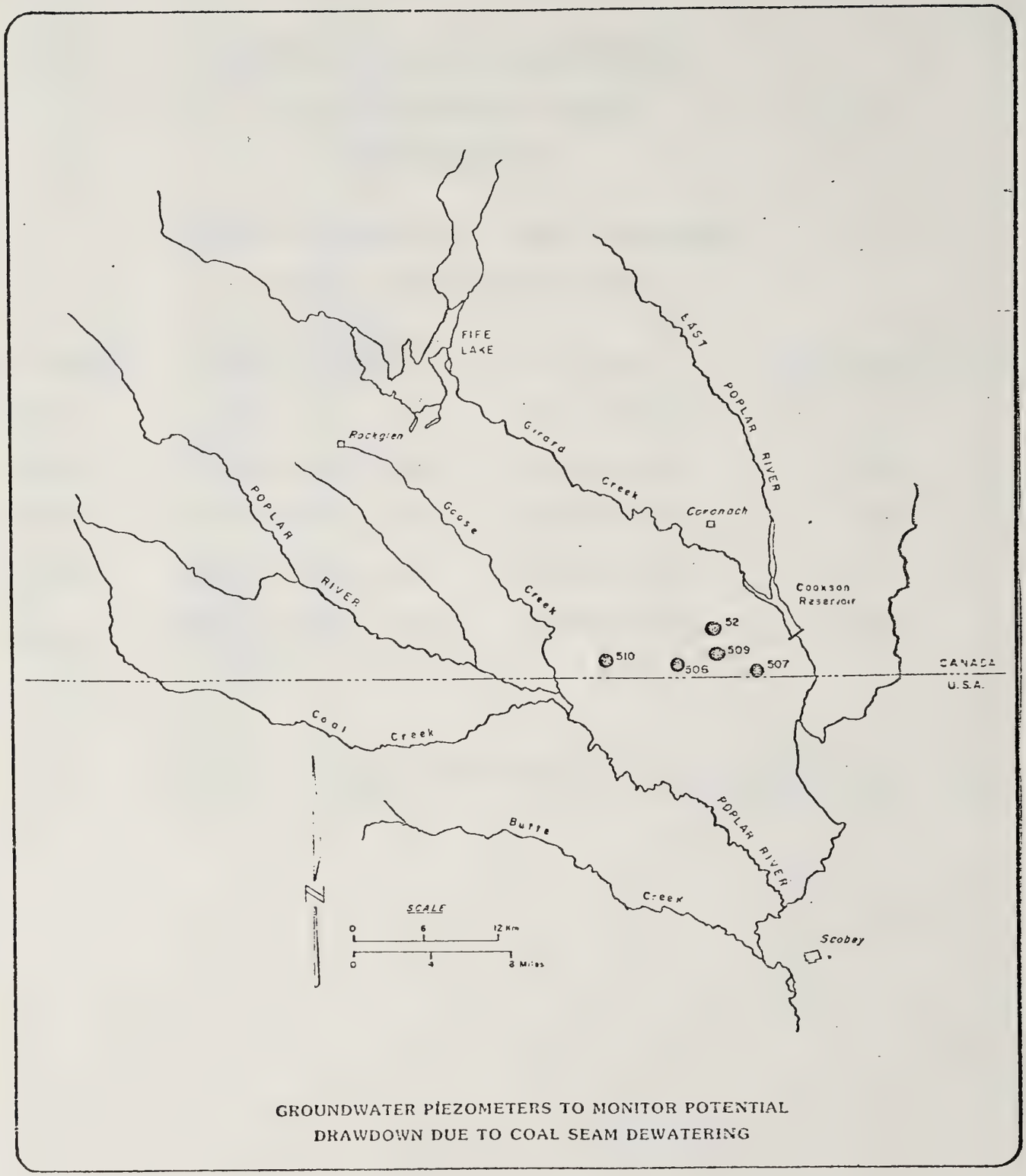
GROUNDWATER PIEZOMETERS TO MONITOR POTENTIAL DRAWDOWN DUE TO COAL SEAM DEWATERING

Responsible Agency: Saskatchewan Environment

Measurement Frequency: Monthly*

SPC Piezometer No.	Location	Perforation Zone (depth in feet)	Tip Elevation (m)
52	NW14-1-27W3	140 - 160 (in coal)	738.442
506	SW4-1-27W3	266 - 270 (in coal)	749.334
507	SW6-1-26W3	110 - 114 (in coal)	726.703
509	NW11-1-27W3	248 - 252 (in coal)	725.770
510	NW1-1-28W3	92 - 96 (in layered coal and clay)	770.279

*Measurement frequency to be reviewed after 1 year.



GROUNDWATER PIEZOMETERS TO MONITOR POTENTIAL
DRAWDOWN DUE TO COAL SEAM DEWATERING

Ground Water Piezometers To Monitor
Potential Drawndown Due to Coal
Season Dewatering-Water Elevation (m)

Piezometer	DOE Ref. No.	1980 Aug.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	1981 May	June	July	Aug.	Sept.	Oct.
52	52		754.31	753.91	753.89	753.84	753.78	753.82							
506	506		RQ 771.83	RQ 795.59	RQ 795.61	RQ 795.87	RQ 795.88	813.54							
507	507		746.25	746.19	746.20	746.18	746.15	746.15							
509	509		752.96	752.52	752.30	752.99	753.09	753.23							
510	510		777.59	777.49	777.46	777.46	777.45	777.42							

GROUNDWATER PIEZOMETER LEVEL MONITORING - ASH LAGOON AREA

SCHEDULE A - PIEZOMETERS IN TILL

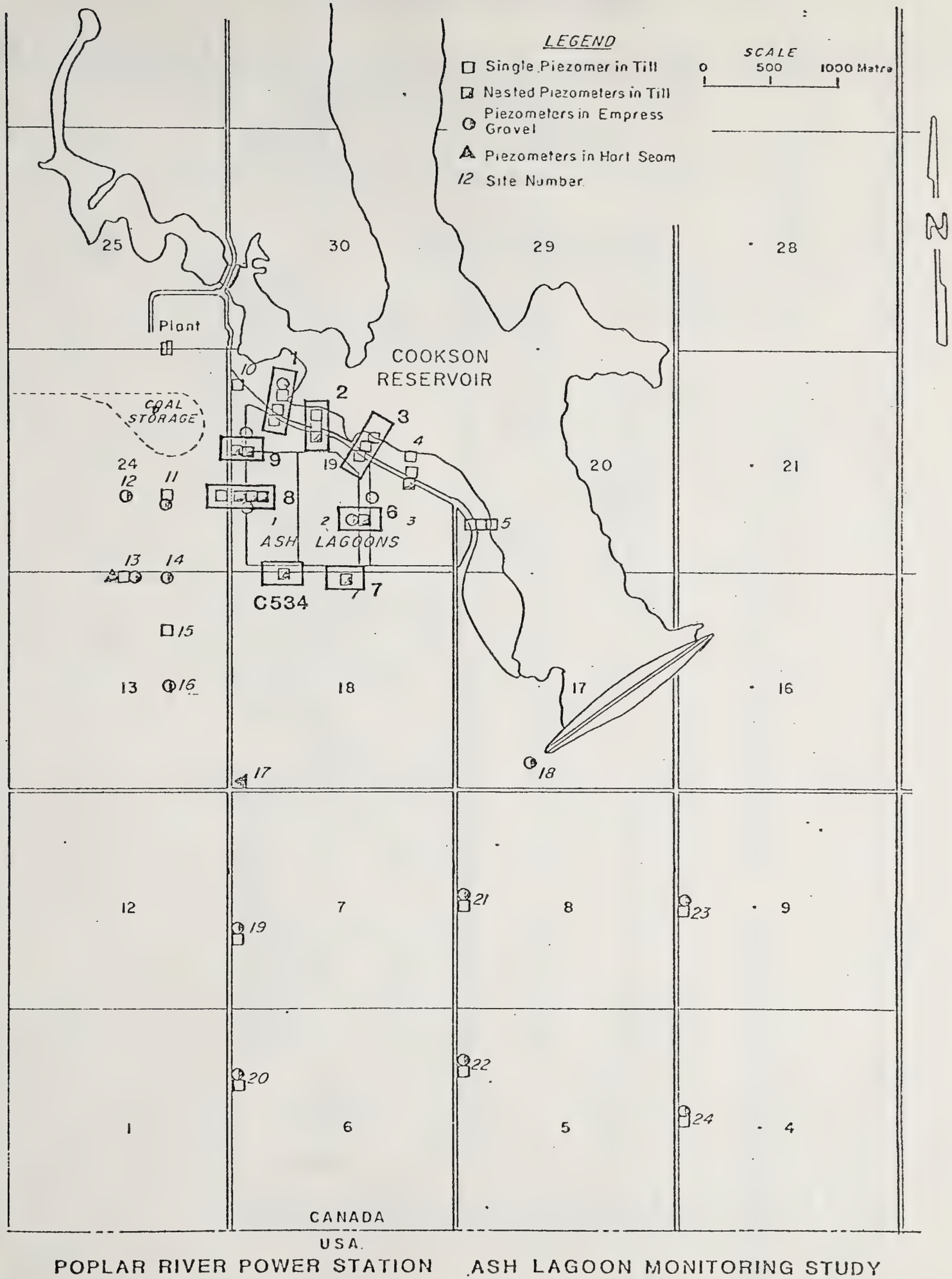
Responsible Agency: Saskatchewan Environment

PIEZOMETER	FREQUENCY IN MEASUREMENT 0-6 MO.	6-12 MO.
1a-C716	Q	Q
1b-C717	Q	Q
1c-C711	Q	Q
$2a_1$-C712A	M	M
$2a_2$-C712B	M	M
$2a_3$-C712C	M	M
$2a_4$-C712D	M	M
2b-C718	M	M
2c-C719	M	M
3a-C713	Q	Q
3b-C720	Q	Q
3c-C721	Q	Q
$6a_1$-C763A	Q	Q
$6a_2$-C763B	Q	Q
$6a_3$-C763C	Q	Q
$6a_4$-C763D	Q	Q
$7a_1$-C729A	Q	Q
$7a_2$-C729B	Q	Q
$7a_3$-C729C	Q	Q
$7a_4$-C729D	Q	Q
C534-C534	M	M
$8a_1$-C730A	M	M
$8a_2$-C730B	M	M
$8a_3$-C730C	M	M
$8a_4$-C730D	M	M
$8b_1$-C727A	M	Q
$8b_2$-C727B	M	Q
$8b_3$-C727C	M	Q
$8c_1$-C726A	M	Q
$8c_2$-C726B	M	Q
$8c_3$-C726C	M	Q
$8c_4$-C726D	M	Q
8d-C748	M	Q
$9a_1$-C764A	M	M
$9a_2$-C764B	M	M
$9a_3$-C764C	M	M
$9a_4$-C764D	Q	M
$9b_1$-C728A	Q	Q
$9b_2$-C728B	Q	Q
$9b_3$-C728C	Q	Q
$9b_4$-C728D	Q	Q

Revised

The schedule applies to 1981. Frequency of monitoring to be evaluated after first year and adjusted to suit need.

Q - quarterly
M - monthly



POPLAR RIVER POWER STATION ASH LAGOON MONITORING STUDY

PIEZOMETER INSTALLATION SITES
SCHEDULE "A" PIEZOMETERS IN TILL

Ground Piezometer Level Monitoring-Ash Lagoon Area
Schedule A-Piezometers in Till Water Elevation (m)

Piezometer	DOE Ref. No.	1980 4th Quarter Oct.	Nov.	Dec.	1981 1st Quarter Jan.	Feb.	Mar.	2nd Quarter Apr.	May	June	3rd Quarter July	Aug.	Sept
1a	C716	751.88		752.28			752.48						
1b	C717	752.05		752.05			751.98						
1c	C711			752.04			751.99						
$2a_1$	C712A	752.02		751.95	751.89	751.89	751.89						
$2a_2$	C712B			752.30	752.09	752.06	752.36						
$2a_3$	C712C			751.66	751.59	751.59	751.59						
$2a_4$	C712D	Dry		Dry	Dry	Dry	Dry						
2b	C718	Dry		752.29	752.22	752.19	752.34						
2c	C719	752.02		752.12	751.97	751.91	752.27						
3a	C713			752.23			752.37						
3b	C720	751.94		752.07			752.30						
3c	C721	752.11		752.09			752.34						
$6a_1$	C763A			753.85			753.72						
$6a_2$	C763B		755.86				Dry						
$6a_3$	C763C		750.00				752.89						
$6a_4$	C763D		748.04				754.42						
$7a_1$	C729A			753.49			752.93						
$7a_2$	C729B						753.25						
$7a_3$	C729C						753.49						
$7a_4$	C729D			754.10			753.68						
C534	C534			757.93	757.86	757.74	757.60						
$8a_1$	C730A	Dry		Dry	749.59		756.71						
$8a_2$	C730B	Dry		Dry	756.70		757.61						
$8a_3$	C730C	Dry		Dry	755.00		755.91						
$8a_4$	C730D	Dry		Dry	755.78		755.82						
$8b_1$	C727A				749.22	750.47	750.89						
$8b_2$	C727B				751.62	751.69	751.75						
$8b_3$	C727C			754.22	753.95	753.83	753.94						
$8c_1$	C726A			753.03	752.55	754.06	754.92						
$8c_2$	C726B			754.94	754.91	755.18	755.20						
$8c_3$	C726C			754.50	754.53	754.65	754.74						
8c4	C726D				Dry	Dry	Dry						
8d	C748	753.99		753.85	753.55	753.61	753.42						
$9a_1$	C764A		751.57		752.70		752.91						
$9a_2$	C764B		752.40		752.86		752.79						
$9a_3$	C764C		751.01		752.42		752.53						
$9a_4$	C764D		751.96		752.24		752.17						
$9b_1$	C728A						Dry						
$9b_2$	C728B			749.86			750.61						
$9b_3$	C728C			Dry			748.76						
$9b_4$	C728D						Dry						

NOTE: 8b4 Piezometer was deleted.

GROUNDWATER PIEZOMETER LEVEL MONITORING - ASH LAGOON AREA AND INTERNATIONAL BOUNDARY AREA

SCHEDULE B - PIEZOMETERS IN EMPRESS

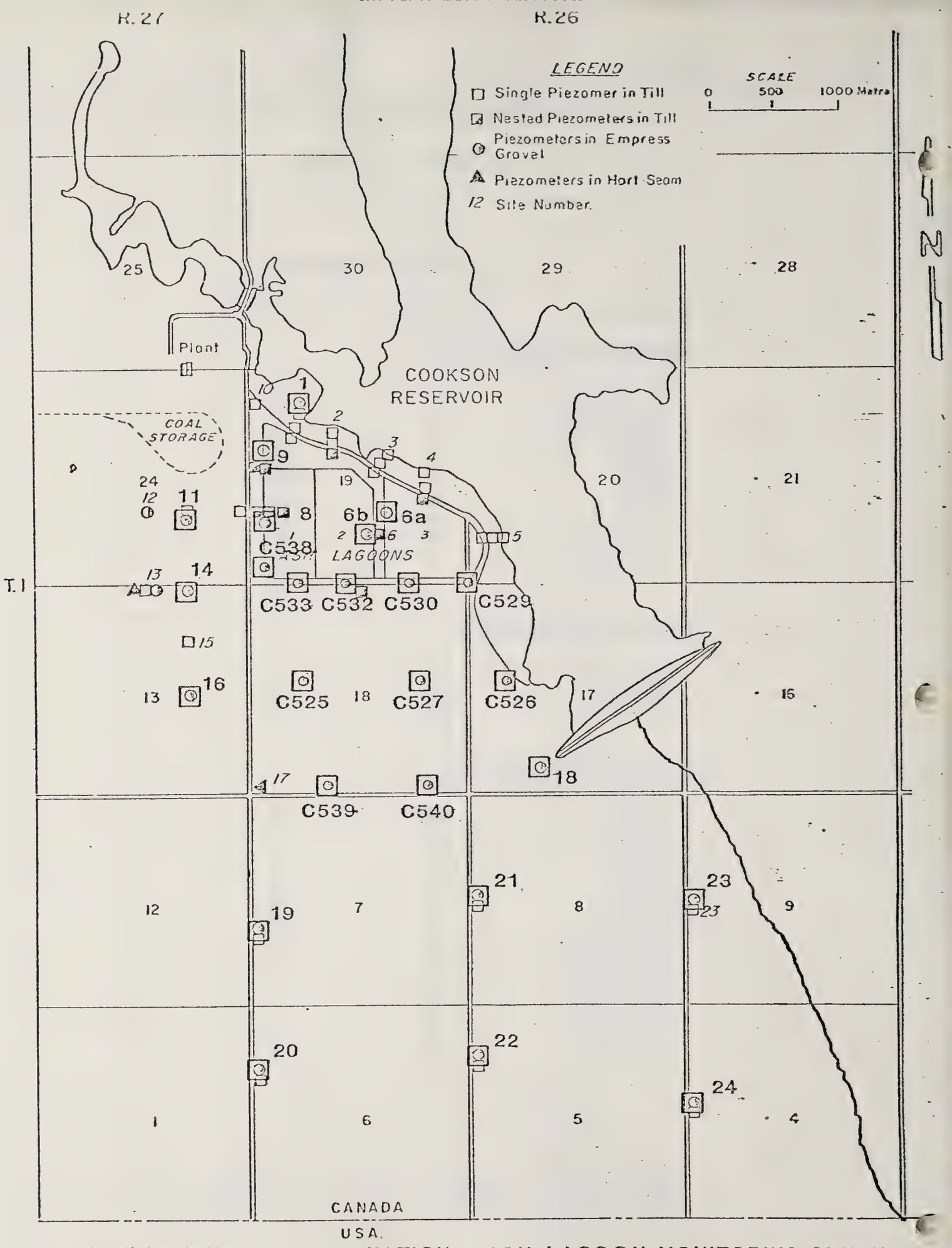
Responsible Agency: Saskatchewan Environment

PIEZOMETER	FREQUENCY IN MEASUREMENT 0-6 MO.	6-12 MO.
Immediate Ash Lagoon Area		
1 -C731	Q	Q
6a-C763E	Q	Q
C529	Q	Q
C530	Q	Q
C532	Q	Q
C533	M	Q
C538	M	Q
8 -C730E	M	Q
9 -C728E	M	Q
West of Ash Lagoon Area		
11-C743	Q	Q
14-C740	Q	Q
16-C756	Q	Q
South of Ash Lagoon Area		
C525	Q	Q
C526	Q	Q
C527	Q	Q
C539	Q	Q
C540	Q	Q
18-C741	Q	Q
19-C735	Q	Q
20-C736	Q	Q
21-C742	Q	Q
22-C733	Q	Q
23-C732	Q	Q
24-C734	Q	Q

Q - quarterly

M - monthly

The Schedule applies to 1981. Frequency of monitoring to be evaluated after one year and adjusted to suit need.



POPLAR RIVER POWER STATION ASH LAGOON MONITORING STUDY

PIEZOMETER INSTALLATION SITES
SCHEDULE "B" PIEZOMETERS IN EMPRESS

Ground Water Piezometer Level Monitoring-Ash Lagoon Area
And International Boundary Area
Schedule B-Piezometers in Empress

Water Elevation (m)

Piezometer	DOE Ref. No.	1980 4th Quarter			1981 1st Quarter			2nd Quarter			3rd Quarter		
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	C731	751.96		751.94			752.23						
6a	C763E			750.94			751.22						
C529	C529			750.17			750.41						
C530	C530			750.35			750.60						
C532	C532			750.43			750.66						
C533	C533			751.23	751.24	751.22	751.37						
C538	C538			751.56	751.63	751.58	751.63						
8	C730E	Dry		Dry	749.25		751.15						
9	C728E			751.58	751.60	751.59	751.87						
11	C743	751.85					751.92						
14	C740	751.78		751.75			751.67						
16	756	Dry					Dry						
C525	C525	750.77					750.67						
C526	C526	748.28					748.35						
C527	C527	749.06					749.13						
C539	C539	751.06		751.00			750.90						
C540	C540	748.84		748.76			748.80						
18	C741	746.46		746.35			746.47						
19	C735	Dry		Dry			Dry						
20	C736	Dry		Dry			Plugged						
21	C742	747.05		746.98			746.88						
22	C733	746.89		746.86			746.82						
23	C732			742.11			742.18						
24	C734			742.06			Plugged						

NOTE: 6b peizometer was deleted.

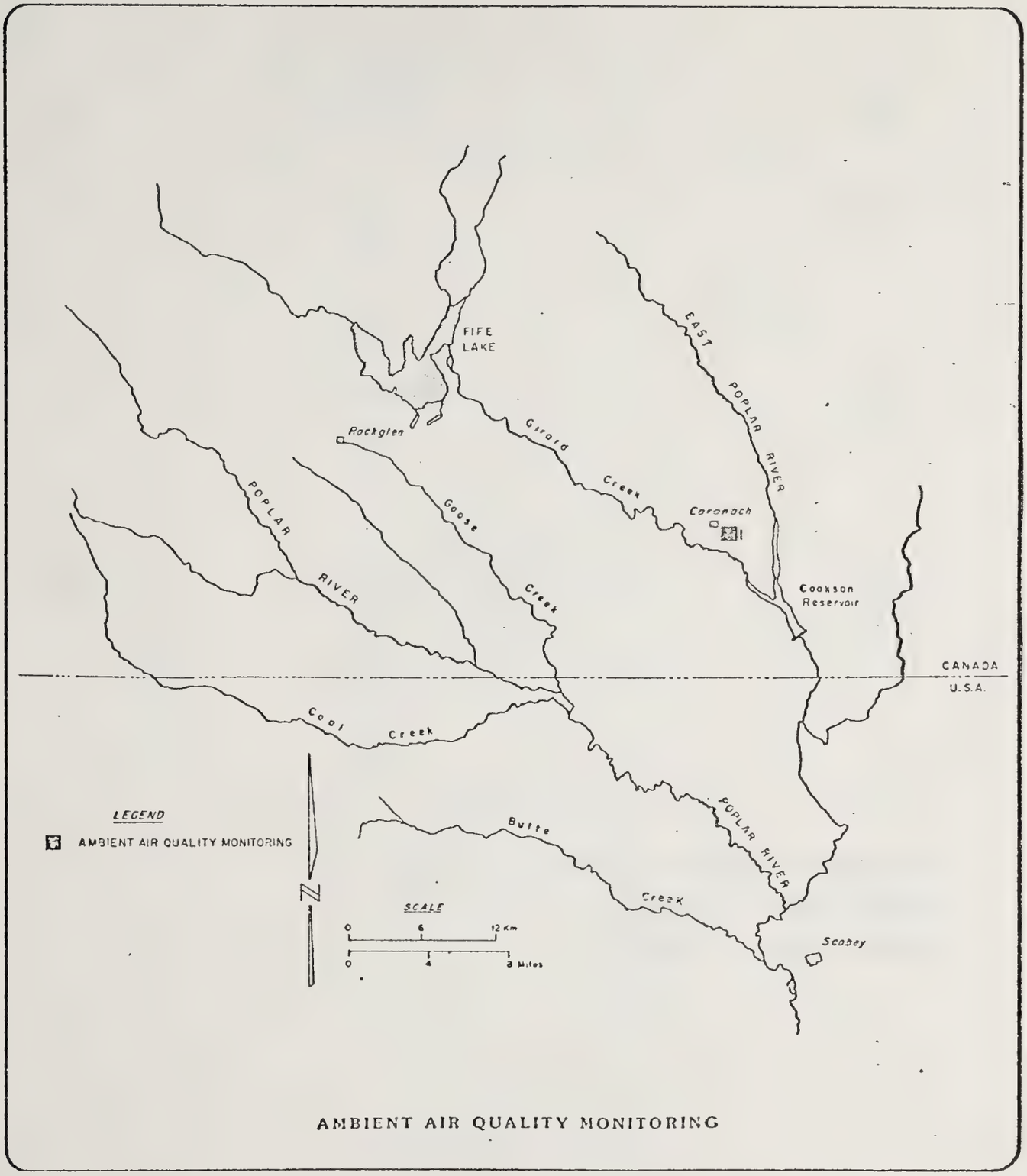
AMBIENT AIR QUALITY MONITORING

Responsible Agency: Saskatchewan Environment

No. on Map	Location	Sampling Frequency	Parameters
1	Coronach	Hourly averages Summary statistics (24 hour for TSP)	Sulfur dioxide, Total suspended Part.

METHODS

Sulfur Dioxide	As approved by Saskatchewan Environment - continuous
Total Suspended Part.	As approved by Saskatchewan Environment - 24-hour sample once/6 days



AMBIENT AIR QUALITY MONITORING

AMBIENT SUSPENDED PARTICULATES
CORONACH WATER TREATMENT PLANT

1st Quarter 1981

DATE	Conc-ug/m^3
January 4	9
10	41
16	20
22	12
28	11
February 3	120
9	---
15	18
21	---
27	23
March 5	13
11	70
17	60
23	22
29	53

Saskatchewan Provincial Standard - 120 ug/m^3
Geometric mean 29 ug/m^3
Arithmetic mean 34 ug/m^3

AMBIENT SO_2
STATION #5
WATER TREATMENT PLANT
CORONACH

PROVINCE OF SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTH: JANUARY YEAR: 1981

STATION: 00001I

SULFUR DIOXIDE LEVELS P.P.H.M.

LOCATION: CORONACH WATER TREATMENT PLANT CORONACH SASKATCHEWAN

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MAX	MEAN
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	****	0.2	0.4	0.1	0.0	0.0	0.1	0.4	0.5	0.3	0.1	0.0	****	0.5	0.1
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
6	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
7	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
8	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
9	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
10	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
11	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
12	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
13	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
14	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
15	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
16	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
17	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
18	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
19	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
20	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
21	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
22	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
23	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
24	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
25	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
26	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
27	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
28	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
29	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
30	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0
31	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0

MONTHLY MAX: 0.5
MONTHLY MEAN: 0.0
NO. OF SAMPLES: 683

**** - DENOTES BLANK DATA

PROVINCE OF SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTH: FEBRUARY YEAR: 1981 STATION: 000011

SULFUR DIOXIDE LEVELS P.P.H.M. LOCATION: CORONACH WATER TREATMENT PLANT CORONACH SASKATCHEWAN

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MAX	MEAN
1	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
3	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0
4	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	****	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
12	****	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
13	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	****	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	****	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
24	****	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	****	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.1
25	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
26	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
27	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MONTHLY MAX: 0.8
MONTHLY MEAN: 0.0
NO. OF SAMPLES: 615

**** - DENOTES BLANK DATA

PROVINCE OF SASKATCHEWAN
DEPARTMENT OF THE ENVIRONMENT
AIR POLLUTION CONTROL BRANCH

MONTH: MARCH YEAR: 1981 STATION: 000011

SULFUR DIOXIDE LEVELS P.P.H.M. LOCATION: CORONACH WATER TREATMENT PLANT CORONACH SASKATCHEWAN

HOUR / DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MAX	MEAN
1	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
5	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.3	0.0
8	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.3	0.0
9	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	0.0	
10																										
11																										
12																										
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14																										
15																										
16																										
17																										
18																										
19	****	****	****	****	****	****	****	****	****	****	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
22	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	****	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	****	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
24	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0
26	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	****	****	****	****	****	****	****	****	****	****	****	****	****	0.0	
31																										

MONTHLY MAX: 0.6
MONTHLY MEAN: 0.0
NO. OF SAMPLES: 425

**** - DENOTES BLANK DATA

PRINTED IN CANADA
R. L. CRAIN INC

SOURCE EMISSION MONITORING

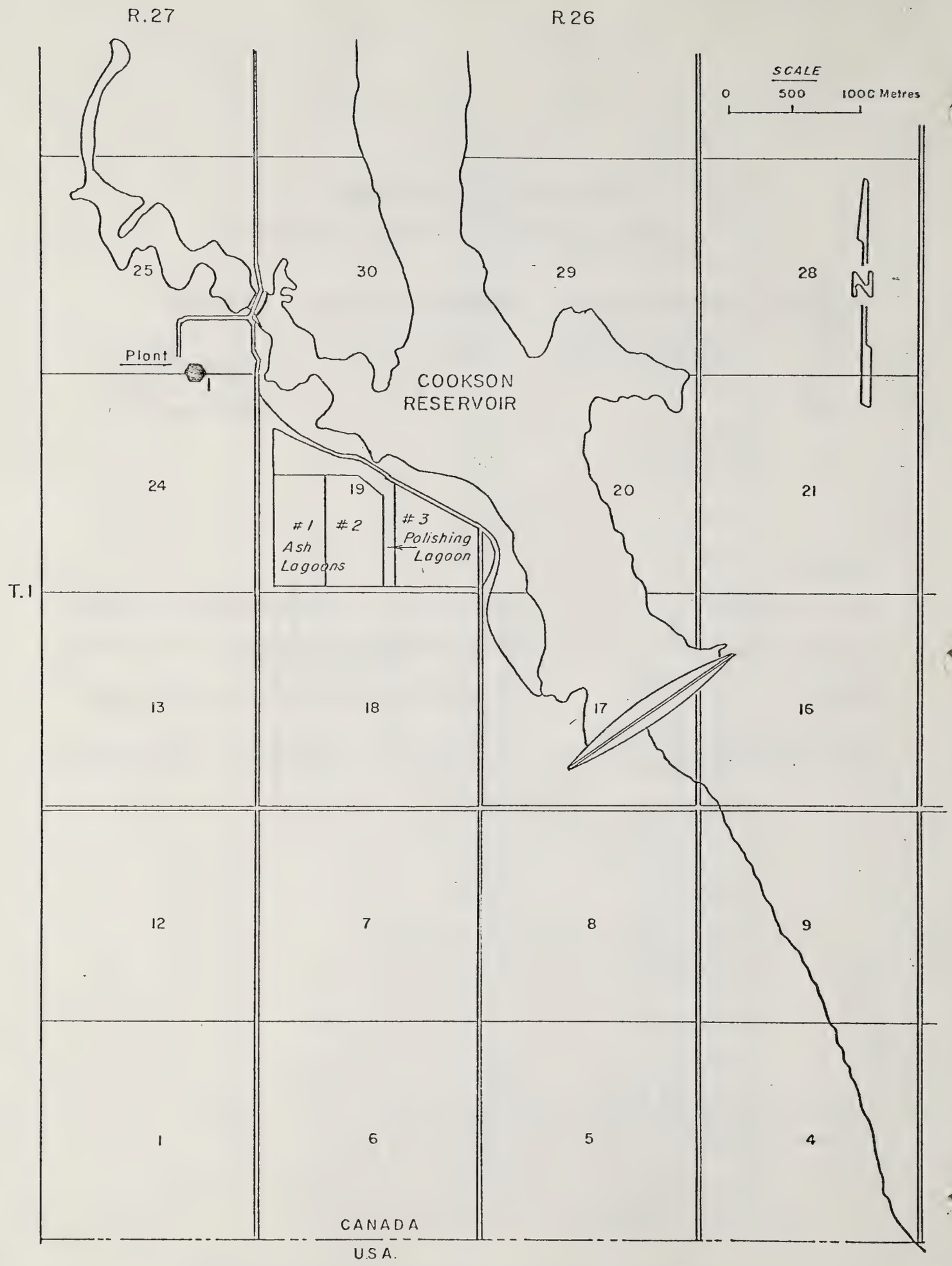
Responsible Agency: Saskatchewan Environment

No. on Map	Station Location	Sampling Frequency	Parameters
1	At Poplar River Power Plant	Hourly Averages	Sulfur Dioxide, Nitrogen Dioxide, Opacity, Oxygen or Carbon Dioxide

METHODS

Sulfur Dioxide	As specified by Saskatchewan Environment
Nitrogen Dioxide	As specified by Saskatchewan Environment
Opacity	As specified by Saskatchewan Environment
Oxygen or Carbon Dioxide for conversion factors	As specified by Saskatchewan Environment

Both SO_2 & NOx are corrected to 3% oxygen



SOURCE EMISSION MONITORING

IN-STACK SO_2

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-March
Stack Sulphur Dioxide (mg/m^3, 3% O_2)

DATE / *TIME*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages																
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000	POPLAR RIVER POWER STATION WAS DOWN FOR															
1100	MAINTENANCE DURING THE MONTH.															
1200																
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																
Peak Concentration																
Max. Hourly Average																
24 Hour Average																

Legend:
- Plant not running
x Stack gas system down

TABLE 1 Continued

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME															
Hourly Averages															
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

POPLAR RIVER POWER STATION WAS DOWN FOR MAINTENANCE DURING THE MONTH

Peak Concentration .

Max. Hourly Average

24 Hour Average

Percent downtime = 0%

Legend:

- Plant not running

x Stack gas system down

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-February
Stack Sulphur Dioxide (mg/m^3, 3% O_2)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100	x	x	x	-	x	-	x	x	x	x						-
0200	x	x	x	-	x	-	x	x	x	x						-
0300	x	x	x	-	x	-	x	x	x	x						-
0400	x	x	x	-	x	-	x	x	x	x						-
0500	x	x	x	-	x	-	x	x	x	x						-
0600	x	x	x	-	x	-	x	x	x	x						-
0700	x	x	x	-	x	-	x	x	x	x						-
0800	x	x	x	-	x	-	x	x	x	x						-
0900	x	x	x	-	x	-	x	x	x	x						-
1000	x	x	x	x	x	-	x	x	x	x						-
1100	x	x	-	x	x	-	x	x	x	-						-
1200	x	x	-	x	x	-	x	x	x	-						-
1300	x	x	-	x	x	-	x	x	x	-						-
1400	x	x	-	x	x	x	x	x	x	-						-
1500	x	x	-	x	-	x	x	x	x	-						x
1600	x	x	-	x	-	x	x	x	x	-						x
1700	x	x	-	x	-	x	x	x	x	-						x
1800	x	x	-	x	-	x	x	x	x	-						x
1900	x	x	-	x	-	x	x	x	x	-						x
2000	x	x	-	x	-	-	x	x	x	-						x
2100	x	x	-	x	-	-	x	x	x	-						x
2200	x	x	-	x	-	-	x	x	x	-						x
2300	x	x	-	x	-	-	x	x	x	-						x
2400	x	x	-	x	-	x	x	x	x	-						x
Peak Concentration	x	x	x	x	x	x	x	x	x	x						x
Max. Hourly Average	x	x	x	x	x	x	x	x	x	x						x
24 Hour Average	x	x	N/A	N/A	N/A	N/A	x	x	x	N/A						N/A

Unit Not Operating

Unit Not Operating

Unit Not Operating

Unit Not Operating

Unit Not Operating

Legend:
- Plant not running
x Stack gas system down

TABLE 1 Continued

DATE												
TIME	17	18	19	20	21	22	23	24	25	26	27	28
Hourly Averages												
0100	x	-	x	x	x	x	x	x	x			
0200	x	-	x	x	x	x	x	x	x			
0300	-	-	x	x	x	x	x	x	x			
0400	-	x	x	x	x	x	x	x	x			
0500	-	x	x	x	x	x	x	x	x			
0600	-	x	x	x	x	x	x	x	x			
0700	-	x	x	x	x	x	x	x	x			
0800	-	x	x	x	x	x	x	x	x			
0900	-	x	x	x	x	x	x	x	x			
1000	-	x	x	-	x	x	x	x	x			
1100	-	x	x	-	x	x	x	x	x			
1200	-	x	x	x	x	x	x	x	x			
1300	-	x	x	x	x	x	x	x	x			
1400	-	x	x	x	x	x	x	x	x			
1500	-	x	x	x	x	x	x	x	x			
1600	-	x	x	x	x	x	x	x	x			
1700	-	x	x	x	x	x	x	x	x			
1800	-	x	x	x	x	x	x	x	x			
1900	-	x	x	x	x	x	x	x	x			
2000	-	x	x	x	x	x	x	x	x			
2100	-	x	x	x	x	x	x	x	-			
2200	-	x	x	x	x	x	x	x	-			
2300	-	x	x	x	x	x	x	x	-			
2400	-	x	x	x	x	x	x	x	-			
Peak Concentration	x	x	x	x	x	x	x	x	x			
Max. Hourly Average	x	x	x	x	x	x	x	x	x			
24 Hour Average	N/A	N/A	x	N/A	x	x	x	x	N/A			

Unit Not Operating

Unit Not Operating

Unit Not Operating

Percent downtime = 100%

Legend:

- Plant not running

x Stack gas system down

TABLE 1

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-January

STACK SULPHUR DIOXIDE (mg/m^3, 3% O_2)

DATE / *TIME*		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	13	*14*	*15*	*16*
Hourly Averages																	
0100		790	x	x	x	x	750	790					-	790	1100	1370	-
0200		820	x	x	x	x	710	790					-	750	1060	1340	-
0300		820	x	x	x	x	670	800					-	750	1100	1320	-
0400		790	x	x	x	x	670	820					-	750	1100	1300	-
0500		860	x	x	x	x	670	820					-	750	1140	1300	-
0600		820	x	x	x	x	650	820					-	710	1100	1260	790
0700		-	x	x	x	x	630	790					-	710	1120	1260	900
0800		-	x	x	x	x	630	820					-	670	1120	1180	900
0900		-	x	x	x	x	630	820					-	670	1180	1140	940
1000		-	x	x	x	x	590	710					-	710	1220	1100	940
1100		x	x	x	x	x	550	710					-	710	1180	980	980
1200	1300	x	x	x	x	x	710	710					-	710	1220	1060	980
1300	1260	x	x	x	x	x	750	710					-	710	1260	900	980
1400	1260	x	x	x	x	710	750	670					-	670	1300	900	1060
1500	1180	x	510	x	x	630	750	-					-	630	1260	-	1340
1600	1060	x	670	x	x	670	750	-					-	630	1100	-	1260
1700	1060	x	790	x	x	670	790	-					-	940	1020	-	1410
1800	1020	x	790	x	x	670	790	-					-	1060	900	-	1450
1900	980	x	750	x	x	630	790	-					-	1060	1060	-	1450
2000	790	x	x	x	x	630	750	-					-	1060	1060	-	1490
2100	750	x	x	x	x	670	750	-					-	1060	1100	-	1490
2200	790	x	x	x	x	590	790	-					-	1060	1100	-	1490
2300	820	x	x	x	x	670	750	-					430	1060	1140	-	1450
2400	790	x	x	x	x	670	750	-					750	1060	1220	-	1450
Peak Concentration		940	820	x	x	710	790	900					820	1100	1570	1610	2120
Max. Hourly Average		860	790	x	x	710	790	820					750	1060	1300	1370	1490
24 Hour Average		N/A	N/A	x	x	N/A	710	N/A					N/A	820	1130	N/A	N/A

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

Legend:
- Plant not running
x Stack gas system down

TABLE 1 CONTINUED

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	1530	-	1410	1490	1530									-	x
0200	1650	-	1300	1490	1450									350	x
0300	1340	-	1300	1470	1490									590	x
0400	980	-	1260	1410	1450									900	x
0500	940	-	1180	1410	1450									900	x
0600	-	-	1180	1340	1490									860	x
0700	-	-	1180	1350	1410									940	x
0800	-	-	1140	1410	1360									1180	x
0900	630	-	1220	1370	1410									1300	x
1000	860	-	1220	1410	1450									1260	x
1100	860	-	1300	1340	1490									1140	x
1200	1100	-	1340	1180	1490									x	x
1300	1490	-	1340	1220	1570									x	x
1400	1370	-	1370	1340	1610									x	x
1500	-	-	1490	1260	-									x	x
1600	-	710	1530	1410	-									x	x
1700	-	900	1570	1450	-									x	x
1800	-	1140	1570	1510	-									x	x
1900	-	1450	1570	1490	-									x	x
2000	-	1490	1610	1570	-									x	x
2100	-	1410	1570	1570										x	x
2200	-	1410	1570	1650	-									x	x
2300	-	1410	1570	1490	-									x	x
2400	-	1410	1530	1490	-									x	x
Peak Concentration	1960	1810	1650	1810	1730									1410	x
Max. Hourly Average	1650	1490	1610	1650	1610									1300	x
24 Hour Average	N/A	N/A	1390	1420	N/A									N/A	x

UNIT NOT OPERATING

Percent Downtime = 36%

Legend:

- Plant not running

x Stack gas system down

IN-STACK NO_X

TABLE 2

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-March
Stack Nitrogen Oxides (mg/m^3, 3% O_2)

DATE / *TIME*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000																
1100																
1200																
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																
Peak Concentration																
Max. Hourly Average																
24 Hour Average																

POPLAR RIVER POWER STATION WAS DOWN FOR MAINTENANCE DURING THE MONTH

Legend:
- Plant not running
x Stack gas system down

TABLE 2 Continued

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME															
Hourly Averages															
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															
Peak Concentration															
Max. Hourly Average															
24 Hour Average															

POPLAR RIVER POWER STATION WAS DOWN FOR MAINTENANCE DURING THE MONTH

Percent downtime = 0%

Legend:
- Plant not running
x Stack gas system down

TABLE 2

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-February
Stack Nitrogen Oxides (mg/m^3, 3% O_2)

DATE / *TIME*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100	x	x	x	-	x	-	x	x	x	x						-
0200	x	x	x	-	x	-	x	x	x	x						-
0300	x	x	x	-	x	-	x	x	x	x						-
0400	x	x	x	-	x	-	x	x	x	x						-
0500	x	x	x	-	x	-	x	x	x	x						-
0600	x	x	x	-	x	-	x	x	x	x						-
0700	x	x	x	-	x	-	x	x	x	x						-
0800	x	x	x	-	x	-	x	x	x	x						-
0900	x	x	x	-	x	-	x	x	x	x						-
1000	x	x	x	x	x	-	x	x	x	x						-
1100	x	x	-	x	x	-	x	x	x	-						-
1200	x	x	-	x	x	-	x	x	x	-						-
1300	x	x	-	x	x	-	x	x	x	-						-
1400	x	x	-	x	x	x	x	x	x	-						-
1500	x	x	-	x	-	x	x	x	x	-	Unit Not Operating	Unit Not Operating	Unit Not Operating	Unit Not Operating	Unit Not Operating	x
1600	x	x	-	x	-	x	x	x	x	-						x
1700	x	x	-	x	-	x	x	x	x	-						x
1800	x	x	-	x	-	x	x	x	x	-						x
1900	x	x	-	x	-	x	x	x	x	-						x
2000	x	x	-	x	-	-	x	x	x	-						x
2100	x	x	-	x	-	-	x	x	x	-						x
2200	x	x	-	x	-	-	x	x	x	-						x
2300	x	x	-	x	-	-	x	x	x	-						x
2400	x	x	-	x	-	x	x	x	x	-						x
Peak Concentration	x	x	x	x	x	x	x	x	x	x						x
Max. Hourly Average	x	x	x	x	x	x	x	x	x	x						x
24 Hour Average	x	x	N/A	N/A	N/A	N/A	x	x	x	N/A						N/A

Legend:
- Plant not running
x Stack gas system down

TABLE 2 Continued

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28
Hourly Averages												
0100	x	-	x	x	x	x	x	x	x			
0200	x	-	x	x	x	x	x	x	x			
0300	-	-	x	x	x	x	x	x	x			
0400	-	x	x	x	x	x	x	x	x			
0500	-	x	x	x	x	x	x	x	x			
0600	-	x	x	x	x	x	x	x	x			
0700	-	x	x	x	x	x	x	x	x			
0800	-	x	x	x	x	x	x	x	x			
0900	-	x	x	x	x	x	x	x	x			
1000	-	x	x	-	x	x	x	x	x			
1100	-	x	x	-	x	x	x	x	x			
1200	-	x	x	x	x	x	x	x	x			
1300	-	x	x	x	x	x	x	x	x			
1400	-	x	x	x	x	x	x	x	x			
1500	-	x	x	x	x	x	x	x	x			
1600	-	x	x	x	x	x	x	x	x			
1700	-	x	x	x	x	x	x	x	x			
1800	-	x	x	x	x	x	x	x	x			
1900	-	x	x	x	x	x	x	x	x			
2000	-	x	x	x	x	x	x	x	x			
2100	-	x	x	x	x	x	x	x	-			
2200	-	x	x	x	x	x	x	x	-			
2300	-	x	x	x	x	x	x	x	-			
2400	-	x	x	x	x	x	x	x	-			
Peak Concentration	x	x	x	x	x	x	x	x	x			
Max. Hourly Average	x	x	x	x	x	x	x	x	x			
24 Hour Average	N/A	N/A	x	N/A	x	x	x	x	N/A			

Unit Not Operating

Unit Not Operating

Unit Not Operating

Percent downtime = 100%

Legend:

- Plant not running

x Stack gas system down

TABLE 2

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-January

STACK NITROGEN OXIDES (mg/m^3, 3% O_2)

DATE TIME		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages																	
0100		98	x	x	x	x	74	49					-	74	123	196	-
0200		98	x	x	x	x	74	49					-	74	123	196	-
0300		98	x	x	x	x	74	49					-	74	123	196	-
0400		123	x	x	x	x	74	49					-	74	123	196	-
0500		123	x	x	x	x	74	49					-	74	123	196	-
0600		123	x	x	x	x	74	49					-	74	123	196	123
0700		-	x	x	x	x	49	49					-	74	123	196	147
0800		-	x	x	x	x	49	49					-	74	123	172	147
0900		-	x	x	x	x	49	49					-	74	123	147	147
1000		-	x	x	x	x	49	49					-	74	123	123	147
1100		x	x	x	x	x	49	49					-	74	123	123	147
1200	98	x	x	x	x	x	49	49					-	74	123	123	147
1300	98	x	x	x	x	x	49	74					-	49	147	123	172
1400	98	x	x	x	x	74	49	74					-	49	147	123	172
1500	98	x	49	x	x	74	49	-					-	49	147	-	221
1600	98	x	74	x	x	74	49	-					-	74	147	-	221
1700	98	x	74	x	x	74	49	-					-	123	123	-	245
1800	98	x	74	x	x	74	49	-					-	123	98	-	245
1900	98	x	74	x	x	74	49	-					-	123	123	-	245
2000	98	x	x	x	x	74	49	-					-	123	123	-	245
2100	98	x	x	x	x	74	49	-					-	123	123	-	245
2200	98	x	x	x	x	74	49	-					-	123	147	-	245
2300	98	x	x	x	x	74	49	-					49	123	196	-	245
2400	98	x	x	x	x	74	49	-					74	123	196	-	245
Peak Concentration		147	74	x	x	74	74	74					74	147	208	221	270
Max. Hourly Average		123	74	x	x	74	74	74					74	123	196	196	245
24 Hour Average		N/A	N/A	x	x	N/A	55	N/A					N/A	87	133	N/A	N/A

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

Legend:
- Plant not running
x Stack gas system down

TABLE 2 CONTINUED

DATE / TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	245	-	172	196	245									-	x
0200	270	-	147	184	245									49	x
0300	196	-	147	196	245									98	x
0400	147	-	147	196	245									98	x
0500	123	-	147	172	245									98	x
0600	-	-	147	147	245									98	x
0700	-	-	147	172	245									123	x
0800	-	-	147	172	245									147	x
0900	98	-	147	172	245									147	x
1000	123	-	135	172	245									147	x
1100	123	-	147	123	270									147	x
1200	172	-	172	123	282									x	x
1300	196	-	172	123	294									x	x
1400	172	-	172	172	294									x	x
1500	-	-	172	196	-									x	x
1600	-	74	196	196	-									x	x
1700	-	74	172	196	-									x	x
1800	-	147	196	221	-									x	x
1900	-	172	196	245	-									x	x
2000	-	172	196	245	-									x	x
2100	-	172	196	245	-									x	x
2200	-	172	196	270	-									x	x
2300	-	172	196	245	-									x	x
2400	-	172	196	245	-									x	x
Peak Concentration	282	172	196	270	294									147	x
Max. Hourly Average	270	172	196	270	294									147	x
24 Hour Average	N/A	N/A	169	193	N/A									N/A	x

UNIT NOT OPERATING

Percent downtime = 36%

Legend:

- Plant not running

x Stack gas system down

IN-STACK % OPACITY

TABLE 3

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-March
Stack Opacity (%)

DATE / *TIME*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000																
1100																
1200																
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																
Peak Concentration																
Max. Hourly Average																
24 Hour Average																

POPLAR RIVER POWER STATION WAS DOWN FOR

MAINTENANCE DURING THE MONTH

Legend:
- Plant not running
x Stack gas system down

TABLE 3 Continued

DATE															
TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900			POPLAR RIVER POWER STATION WAS DOWN FOR												
1000			MAINTENANCE DURING THE MONTH												
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

Peak Concentration
Max. Hourly Average
24 Hour Average

Percent Downtime = 0%

Legend:
- Plant not running
x Stack gas system down

TABLE 3

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-February
Stack Opacity (%)

DATE TIME	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Hourly Averages																
0100	43	41	44	-	68	-	57	63	61	62						-
0200	49	45	48	-	65	-	57	63	64	60						-
0300	45	48	48	-	66	-	60	63	62	55						-
0400	43	43	53	-	66	-	54	67	60	50						-
0500	42	39	46	-	61	-	52	60	60	48						-
0600	49	42	46	-	67	-	55	64	57	38						-
0700	54	44	46	-	62	-	56	67	59	32						-
0800	48	48	45	-	60	-	60	69	60	25						-
0900	46	43	50	-	61	-	54	68	53	25						-
1000	45	42	51	66	59	-	51	64	54	24						-
1100	44	43	-	77	53	-	50	63	46	-						-
1200	49	43	-	79	54	-	50	63	48	-						-
1300	44	47	-	74	48	-	57	63	49	-						-
1400	44	43	-	75	53	55	65	65	41	-						-
1500	45	42	-	72	-	30	72	63	60	-						61
1600	44	42	-	71	-	34	73	64	49	-						52
1700	48	46	-	65	-	41	70	62	50	-						76
1800	42	52	-	65	-	44	72	62	40	-						68
1900	42	50	-	69	-	65	65	64	60	-						57
2000	41	48	-	72	-	-	66	61	60	-						25
2100	44	46	-	73	-	-	68	59	46	-						32
2200	50	46	-	74	-	-	71	59	32	-						55
2300	43	52	-	72	-	-	71	61	34	-						55
2400	42	48	-	67	-	59	64	66	49	-						51
Peak Concentration	86	85	86	89	86	89	86	86	86	86						87
Max. Hourly Average	54	52	53	79	68	65	73	69	64	62						76
24 Hour Average	45	45	N/A	N/A	N/A	N/A	61	63	52	N/A						N/A

Unit Not Operating

Unit Not Operating

Unit Not Operating

Unit Not Operating

Unit Not Operating

Legend:
- Plant not running
x Stack gas system down

TABLE 3 Continued

DATE												
TIME	17	18	19	20	21	22	23	24	25	26	27	28
Hourly Averages												
0100	49	-	63	56	40	41	41	39	40			
0200	62	-	60	48	41	42	40	38	35			
0300	-	-	60	47	42	45	40	39	32			
0400	-	74	59	49	42	40	46	39	33			
0500	-	55	58	47	41	40	37	42	33			
0600	-	57	52	52	44	42	39	38	38			
0700	-	61	56	45	49	42	38	36	32			
0800	-	62	57	44	42	45	39	36	32			
0900	-	64	54	39	42	40	44	38	32			
1000	-	51	58	-	43	36	38	44	40			
1100	-	48	50	-	42	36	36	37	36			
1200	-	55	52	61	46	39	38	36	33			
1300	-	65	51	49	41	42	36	35	33			
1400	-	65	52	48	43	37	38	35	39			
1500	-	62	54	49	42	39	34	40	40			
1600	-	69	47	61	48	39	38	35	48			
1700	-	73	51	47	49	46	40	36	44			
1800	-	70	53	48	43	46	39	34	47			
1900	-	76	53	52	40	41	44	35	47			
2000	-	66	57	50	40	40	37	40	57			
2100	-	68	50	54	40	39	35	35	-			
2200	-	67	48	45	46	37	41	34	-			
2300	-	69	44	47	41	51	46	34	-			
2400	-	68	49	47	41	43	47	35	-			
Peak Concentration	88	89	86	88	85	85	85	85	85			
Max. Hourly Average	62	74	63	61	49	51	47	44	57			
24 Hour Average	N/A	N/A	54	N/A	43	41	40	37	N/A			

Unit Not Operating

Unit Not Operating

Unit Not Operating

Percent Downtime = 0%

Legend:

- Plant not running

x Stack gas system down

TABLE 3

POPLAR RIVER POWER STATION
AIR QUALITY MONTHLY SUMMARY FOR 1981-January

DATE / TIME	STACK OPACITY (%) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hourly Averages																
0100	21	30	40	37	38	34	35						33	42	35	-
0200	23	56	41	37	43	36	36						31	41	36	-
0300	24	85	42	39	37	37	37						32	43	36	-
0400	22	71	41	39	40	41	36						26	42	35	-
0500	57	72	59	34	40	35	41						29	39	39	-
0600	71	71	55	35	35	37	35						29	40	36	84
0700	-	72	55	36	36	37	37						29	40	34	83
0800	-	75	52	41	38	38	37						30	39	38	72
0900	-	53	39	38	39	41	37						25	40	34	52
1000	-	35	41	36	41	33	42						28	36	46	46
1100	77	38	41	37	34	34	34						32	37	45	49
1200	40	48	43	38	34	36	35						37	39	48	38
1300	26	85	40	41	37	39	35						41	46	54	37
1400	25	84	37	41	43	43	37						35	53	56	38
1500	27	74	37	36	40	37	-						33	47	-	39
1600	46	70	36	33	33	36	-						37	42	-	60
1700	31	52	39	35	36	37	-						44	40	-	61
1800	23	43	37	40	38	38	-						45	35	-	76
1900	22	54	36	41	35	41	-						41	32	-	74
2000	25	62	37	35	35	37	-						44	33	-	72
2100	37	53	39	38	36	39	-						45	33	-	71
2200	27	38	41	38	38	38	-						46	39	-	69
2300	20	38	39	41	40	38	-					74	47	37	-	66
2400	18	38	34	40	40	41	-					39	41	40	-	65
Peak Concentration	87	88	86	86	86	86	89					87	85	85	85	86
Max. Hourly Average	77	85	59	41	43	41	42					74	47	53	56	84
24 Hour Average	N/A	58	42	38	38	38	N/A					N/A	36	40	N/A	N/A

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

UNIT NOT OPERATING

Legend:
- Plant not running
x Stack gas system down

DATE															
TIME	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hourly Averages															
0100	63	-	44	51	41									-	59
0200	65	-	45	47	35									83	57
0300	61	-	48	46	34									78	57
0400	66	-	45	49	37									51	55
0500	63	-	42	51	37									47	55
0600	-	-	40	39	41									43	58
0700	-	-	41	39	36									56	52
0800	-	-	43	38	34									54	53
0900	58	-	39	39	35									58	53
1000	45	-	33	42	35									61	54
1100	45	-	35	39	38									55	55
1200	48	-	34	35	32									68	53
1300	46	-	34	36	29									49	50
1400	50 -	-	37	39	30									45	55
1500	-	-	37	41	-									46	54
1600	-	60	39	33	-									45	59
1700	-	30	40	34	-									45	59
1800	-	44	45	39	-									51	55
1900	-	46	53	45	-									54	56
2000	-	50	53	51	-									58	56
2100	-	49	53	41	-									54	57
2200	-	48	53	33	-									58	51
2300	-	51	54	33	-									56	48
2400	-	45	59	35	-									61	47
Peak Concentration	86	86	86	85	87									87	86
Max. Hourly Average	66	60	59	51	41									83	59
24 Hour Average	N/A	N/A	44	41	N/A									N/A	55

UNIT NOT OPERATING

Percent downtime = 0%

Legend:

- Plant not running

x Stack gas system down

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